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container are not required to be collected or captured.

- (c) Equipment design and operation. Each closed-purge, closed-loop, or closed vent system as required in paragraph (b) of this section shall meet the applicable requirements specified in paragraphs (c)(1) through (c)(5) of this section.
- (1) The system shall return the purged process fluid directly to a process line or to a fuel gas system that meets the requirements of either §63.1034 or §63.1021(b); or
  - (2) [Reserved]
- (3) Be designed and operated to capture and transport all the purged process fluid to a control device that meets the requirements of either §63.1034 or §63.1021(b); or
- (4) Collect, store, and transport the purged process fluid to a system or facility identified in paragraph (c)(4)(i), (c)(4)(ii), or (c)(4)(iii) of this section.
- (i) A waste management unit as defined in 40 CFR 63.111 or subpart G, if the waste management unit is subject to and operating in compliance with the provisions of 40 CFR part 63, subpart G, applicable to group 1 wastewater streams. If the purged process fluid does not contain any regulated material listed in Table 9 of 40 CFR part 63, subpart G, the waste management unit need not be subject to, and operated in compliance with the requirements of 40 CFR part 63, subpart G, applicable to group 1 wastewater steams provided the facility has a National Pollution Discharge Elimination System (NPDES) permit or sends the wastewater to an NPDES-permitted fa-
- (ii) A treatment, storage, or disposal facility subject to regulation under 40 CFR parts 262, 264, 265, or 266; or
- (iii) A facility permitted, licensed, or registered by a State to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR part 261.
- (5) Containers that are part of a closed purge system must be covered or closed when not being filled or emptied.
- (d) *In-situ sampling systems*. In-situ sampling systems and sampling systems without purges are exempt from

the requirements of paragraphs (b) and (c) of this section.

## $\S\,63.1033$ Open-ended valves or lines standards.

- (a) Compliance schedule. The owner or operator shall comply with this section no later than the compliance date specified in the referencing subpart.
- (b) Equipment and operational requirements. (1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §§63.1021(b), 63.1036, 63.1037, and paragraphs (c) and (d) of this section. The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line, or during maintenance. The operational provisions of paragraphs (b)(2) and (b)(3) of this section also apply.
- (2) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.
- (3) When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (b)(1) of this section at all other times.
- (c) Emergency shutdown exemption. Open-ended valves or lines in an emergency shutdown system that are designed to open automatically in the event of a process upset are exempt from the requirements of paragraph (b) of this section.
- (d) Polymerizing materials exemption. Open-ended valves or lines containing materials that would autocatalytically polymerize or, would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in paragraph (b) of this section are exempt from the requirements of paragraph (b) of this section.

# § 63.1034 Closed vent systems and control devices; or emissions routed to a fuel gas system or process standards.

(a) Compliance schedule. The owner or operator shall comply with this section

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no later than the compliance date specified in the referencing subpart.

- (b) Compliance standard. (1) Owners or operators routing emissions from equipment leaks to a fuel gas system or process shall comply with the provisions of subpart SS of this part, except as provided in §63.1002(b).
- (2) Owners or operators of closed vent systems and control devices used to comply with the provisions of this subpart shall comply with the provisions of subpart SS of this part and (b)(2)(i) through (b)(2)(ii) of this section, except as provided in §63.1002(b).
- (i) Nonflare control devices shall be designed and operated to reduce emissions of regulated material vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, whichever is less stringent. The 20 parts per million by volume standard is not applicable to the provisions of §63.1016.
- (ii) Enclosed combustion devices shall be designed and operated to reduce emissions of regulated material vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent, or to provide a minimum residence time of 0.50 seconds at a minimum temperature of 760°C (1400°F).
- (iii) Flares used to comply with the provisions of this subpart shall comply with the requirements of subpart SS of this part.

## §63.1035 Quality improvement program for pumps.

- (a) Criteria. If, on a 6-month rolling average, at least the greater of either 10 percent of the pumps in a process unit or affected facility (or plant site) or three pumps in a process unit or affected facility (or plant site) leak, the owner or operator shall comply with the requirements specified in paragraphs (a)(1) and (a)(2) of this section.
- (1) Pumps that are in food and medical service or in polymerizing monomer service shall comply with all requirements except for those specified in paragraph (d)(8) of this section.
- (2) Pumps that are not in food and medical or polymerizing monomer

service shall comply with all of the requirements of this section.

- (b) Exiting the QIP. The owner or operator shall comply with the requirements of this section until the number of leaking pumps is less than the greater of either 10 percent of the pumps or three pumps, calculated as a 6-month rolling average, in the process unit or affected facility (or plant site). Once the performance level is achieved, the owner or operator shall comply with the requirements in §63.1026.
- (c) Resumption of QIP. If, in a subsequent monitoring period, the process unit or affected facility (or plant site) has greater than either 10 percent of the pumps leaking or three pumps leaking (calculated as a 6-month rolling average), the owner or operator shall resume the quality improvement program starting at performance trials.
- (d) QIP requirements. The quality improvement program shall meet the requirements specified in paragraphs (d)(1) through (d)(8) of this section.
- (1) The owner or operator shall comply with the requirements in §63.1026.
- (2) Data collection. The owner or operator shall collect the data specified in paragraphs (d)(2)(i) through (d)(2)(v) of this section and maintain records for each pump in each process unit or affected facility (or plant site) subject to the quality improvement program. The data may be collected and the records may be maintained on a process unit, affected facility, or plant site basis.
- (i) Pump type (e.g., piston, horizontal or vertical centrifugal, gear, bellows); pump manufacturer; seal type and manufacturer; pump design (e.g., external shaft, flanged body); materials of construction; if applicable, barrier fluid or packing material; and year installed.
- (ii) Service characteristics of the stream such as discharge pressure, temperature, flow rate, corrosivity, and annual operating hours.
- (iii) The maximum instrument readings observed in each monitoring observation before repair, response factor for the stream if appropriate, instrument model number, and date of the observation.